

WHAT IS CLAIMED IS:

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1. An information reproducing method comprising the steps of:

reading information from an information medium that is rotated; and

10 determining a rotation velocity of the information medium on the basis of a data transfer rate based on a specification of a read request.

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2. An information reproducing method comprising the steps of:

20 reading information from an information medium that is rotated; and

measuring an average transfer rate in data read and lowering a rotation velocity of the information medium if the average transfer rate measured is equal to or lower than a predetermined threshold value.

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3. An information reproducing method comprising the  
5 steps of:

reading information from an information medium that is  
rotated; and

measuring an average transfer rate in data read and  
raising a rotation velocity of the information medium if the average  
10 transfer rate measured is greater than a predetermined threshold  
value.

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4. An information reproducing method comprising the  
steps of:

reading information from an information medium that is  
rotated;

20 measuring an average transfer rate in data read and  
raising a rotation velocity of the information medium if the average  
transfer rate measured is greater than a predetermined threshold  
value; and

lowering the rotation velocity if the average transfer  
25 rate is equal to or lower than the predetermined threshold value.

5           5. The information reproducing method as claimed in  
any of claims 2 to 4, further comprising the steps of:  
          monitoring whether the read request is issued; and  
          restarting measurement of the average transfer rate if  
the read request is not issued for a predetermined time in  
10 measurement of the average transfer rate.

15           6. The information reproducing method as claimed in  
any of claims 2 to 4, further comprising the steps of:  
          monitoring a read address of the read request; and  
          restarting measurement of the average transfer rate if  
the read address is arranged in a formation other than an increasing  
20 order.

25           7. The information reproducing method as claimed in

any of claims 2 to 4, further comprising the steps of:

determining validity of the average transfer rate on the basis of average transfer rates obtained a number of times of measurement; and

5           validating the average transfer rate if the average transfer rates obtained a number of times of measurement are close to each other.

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8. The information reproducing method as claimed in claim 4, wherein a first threshold value which is one of said predetermined threshold value and is used for raising the rotation  
15   velocity of the information medium is greater than a second threshold value which is another one of said predetermined threshold value and is used for lowering the rotation velocity of the information medium.

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9. The information reproducing method as claimed in any of claims 2 through 4, further comprising the steps of:

25           temporarily storing information read from the

information medium in a cache memory;

pre-reading information if a space is available in the  
cache memory; and

causing measurement of the average transfer rate to be  
5 initiated when the cache memory is full of data and the pre-reading  
of information is completed in a case where information is read  
from the information medium at a maximum rate.

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10. An information reproducing apparatus comprising:  
a motor rotating an information medium;  
an optical pickup reading information from the  
15 information medium; and  
a part determining a rotation velocity of the information  
medium on the basis of a data transfer rate based on a specification  
of a read request.

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11. An information reproducing apparatus comprising:  
a motor rotating an information medium;  
25 an optical pickup reading information from the

information medium;

a measuring part measuring an average transfer rate in data read;

a comparing part comparing the average transfer rate measured with a predetermined threshold value; and

a rotation velocity control part lowering a rotation velocity of the information medium by the motor if a result of comparison shows that the average transfer rate measured is equal to or lower than a predetermined threshold value.

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12. An information reproducing apparatus comprising;

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a motor rotating an information medium;

an optical pickup reading information from the information medium;

a measuring part measuring an average transfer rate in data read;

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a comparing part comparing the average transfer rate measured with a predetermined threshold value; and

a rotation velocity control part raising a rotation velocity of the information medium by the motor if a result of comparison shows that the average transfer rate measured exceeds a predetermined threshold value.

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5           13. An information reproducing apparatus comprising:  
a motor rotating an information medium;  
an optical pickup reading information from the  
information medium;  
a measuring part measuring an average transfer rate in  
10 data read;  
a comparing part comparing the average transfer rate  
measured with a predetermined threshold value; and  
a rotation velocity control part lowering a rotation  
velocity of the information medium by the motor if a result of  
15 comparison shows that the average transfer rate measured is equal  
to or lower than a predetermined threshold value and raising the  
rotation velocity if the result of comparison shows the average  
transfer rate measured exceeds the predetermined threshold value.

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14. The information reproducing apparatus as claimed  
in any of claims 11 through 13, further comprising:  
25 a monitoring part monitoring whether the read request is

issued; and

a restarting part restarting measurement of the average transfer rate if the read request is not issued for a predetermined time in measurement of the average transfer rate.

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15. The information reproducing apparatus as claimed  
10 in any of claims 11 through 13, further comprising:

a monitoring part monitoring a read address of the read request; and

a restarting part restarting measurement of the average transfer rate if the read address is arranged in a formation other than  
15 an increasing order.

20 16. The information reproducing apparatus as claimed in any of claims 11 to 13, further comprising:

a determining part determining validity of the average transfer rate on the basis of average transfer rates obtained a number of times of measurement; and

25 a validating part validating the average transfer rate if

the average transfer rates obtained a number of times of measurement are close to each other.

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17. The information reproducing apparatus as claimed in claim 13, wherein a first threshold value which is one of said predetermined threshold value and is used for raising the rotation  
10 velocity of the information medium is greater than a second threshold value which is another one of said predetermined threshold value and is used for lowering the rotation velocity of the information medium.

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18. The information reproducing apparatus as claimed in any of claims 11 to 14, further comprising:

20 a storing part temporarily storing information read from the information medium in a cache memory;

a pre-reading part pre-reading information if a space is available in the cache memory; and

a part causing measurement of the average transfer rate  
25 to be initiated when the cache memory is full of data and the pre-

reading of information is completed in a case where information is read from the information medium at a maximum rate.